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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/043,803      | 01/10/2002  | Richard Clewer       | PD-201003           | 9080             |

7590 04/03/2006

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Patent Docket Administration  
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EXAMINER

FLANAGAN, KRISTA M

ART UNIT PAPER NUMBER

2817

DATE MAILED: 04/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/043,803

Applicant(s)

CLEWER ET AL.

Examiner

Krista M. Flanagan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 10 January 2006 have been fully considered but they are not persuasive. Applicant argues that Genrich does not disclose two critical features recited in independent claim 1 and 11 as amended by the Response filed on 15 April 2005: 1) a demodulator and a method of demodulating capable of partitioning an incoming modulation signal having data rate  $R$  using  $N$  shift registers; and 2) a demodulator and a method of demodulating that used  $N$  shift registers having a data rate dependent on the number of shift registers being used to process the incoming modulated signal i.e.,  $R/N$ . Examiner agrees that Genrich does not explicitly disclose a demodulator having  $N$  shift registers. However, Genrich does use a demultiplexer to partition the signal and it is well known in the art that a demultiplexer can use shift registers in its architecture.
2. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 103*

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Genrich, US Patent No. 6,055,280 in further view of Negus, US Patent No. 5,150,364.
5. Genrich discloses a high data rate digital demodulator and bit synchronizer for intended use in high data rate ground station applications. A high data rate digital BPSK/QPSK demodulator (10) analog to digital converter section (20) comprises a demultiplexer (14), which

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outputs a clock and a data signal at that lower/divided clock rate is disclosed (See figure 1 and corresponding text, column 2, lines 1-4 and 30-32, column 6, lines 38-41 and column 7, lines 1-4). A digital signal processor (30) then receives the clock and the data signal and processes the demultiplexed signal and outputs the detected signals from the demodulator (See figure 2 and corresponding text). Genrich does not explicitly disclose a demultiplexer circuit having shift registers. However, Negus discloses an interleaved time division demultiplexer having latches. The demultiplexer of Negus demultiplexes a serial input bit stream having an input data rate of  $B$  into  $M$  parallel output bits and also yields a clock frequency of  $B/M$  (See abstract). It would be obvious for one of ordinary skill in the art to use the demultiplexer of Negus in the demodulator of Genrich without any change in performance.

### *Conclusion*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krista M. Flanagan whose telephone number is (571) 272-2203.

The examiner can normally be reached on Monday - Friday, 8 - 4:30.

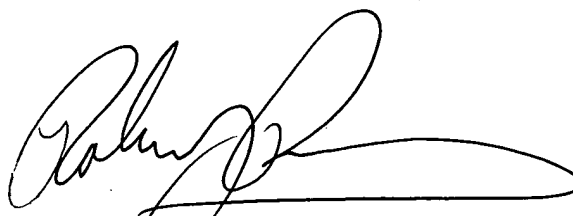
7. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on (571) 272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

K. Flanagan  
20060329



**Robert Pascal**  
Supervisory Patent Examiner  
Technology Center 2800